CLAIMS:

1. A system for determining the movement of fringes and/or nodes of an interference pattern, comprising:

   a detection device for capturing an image of the interference pattern;

   a user interface in communication with said detection device for displaying to a user said image;

   a first module that allows a user to interactively select at least one sampling region from said image; and

   a second module that determines the passage of at least one of the fringes and nodes of the interference pattern through said at least one sampling region.

2. A system according to claim 1, wherein said first module allows a user to select the shape of said at least one sampling region.

3. A system according to claim 1, wherein said first module allows a user to selected the size of said at least one sampling region.

4. A system according to claim 1, wherein said first module allows a user to select at least two sampling regions and said second module determines the passage of at least one of the fringes and nodes through each of said at least two sampling regions.

5. A system according to claim 4, wherein said first module allows a user to select the shape of each of said at least two sampling regions.

6. A system according to claim 4, wherein said first module allows a user to selected the size of each of said at least two sampling regions.

7. A system according to claim 1, wherein said second module determines the average brightness of said image in said at least one sampling region.

8. A system according to claim 1, further comprising a third module that graphically displays to a user the passage of at least one of the fringes and nodes through said at least one sampling region.

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9. A system according to claim 8, wherein said third module displays an average brightness versus time or pressure curve corresponding to said at least one sampling region.

10. A system according to claim 4, further comprising a third module that graphically displays to a user the passage of at least one of the fringes and nodes through each of said at least two sampling regions.

11. A system according to claim 10, wherein said third module displays an average brightness versus time or pressure curve for each of said at least two sampling . regions.

12. A system according to claim 1, further comprising:
   a third module that displays a curve representing the movement of fringes and nodes of the interference through the at least one sampling region;
   a fourth module that analyzes at least one characteristic of said curve and displaying to a user a result of said analysis; and
   a fifth module that allows a user to interactively change said result.

13. A system according to claim 4, further comprising:
   a third module that displays a curve for each of said at least two sampling regions representing the movement of fringes and nodes of the interference through the corresponding one of said at least two sampling regions;
   a fourth module that analyzes at least one characteristic of each of said curves and displaying to a user a result of said analysis; and
   a fifth module that allows a user to interactively change said result.

14. A system according to claim 1, wherein said detection device is a digital camera.

15. A system for determining the movement of fringes and nodes of an interference pattern through at least one sampling region, comprising:
   a first module that displays at least one curve representing the movement of fringes and nodes of the interference through the at least one sampling region;

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a second module that analyzes at least one characteristic of said curve and displays to a user a result of said analysis; and

a third module that allows a user to interactively change said result.

16. A system according to claim 15, wherein said second module determines the location on said curve of at least one maximum or minimum and displays to a user said location.

17. A system according to claim 16, wherein said second module displays a first visual indicator at said location.

18. A system according to claim 17, wherein said third module allows a user to move said first visual indicator.

19. A system according to claim 17, wherein said third module allows a user to add a second visual indicator.

20. A system according to claim 18, wherein said third module allows a user to remove said first visual indicator.

21. A system according to claim 15, wherein said second module displays on said curve a first visual indicator corresponding to said at least one characteristic of said curve.

22. A system according to claim 21, wherein said third module allows a user to move said first visual indicator.

23. A system according to claim 21, wherein said third module allows a user to add a second visual indicator.

24. A system according to claim 21, wherein said third module allows a user to remove said first visual indicator.

25. A system according to claim 15, wherein said first module displays at least two curves corresponding to corresponding one of a plurality of sampling regions.

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26. A system according to claim 25, wherein said second module analyses each of said at least two curves and displays results for each.

27. A system according to claim 26, wherein said third module allows a user to manipulate said result for each of said at least two curves.

28. A system according to claim 15, further comprising a fourth module for using said results as modified by a user.

29. A system according to claim 28, wherein the system determines a displacement of a structure and said fourth module calculates the displacement.

30. A method of determining the movement of fringes and/or nodes of an interference pattern, comprising the steps of:
   capturing an image of the interference pattern;
   displaying said image on a display device; and
   interactively selecting at least one sampling region from said image displayed on said display device.

31. A method according to claim 30, wherein the step of capturing said image includes capturing said image with a digital camera.

32. A method according to claim 30, wherein the step of displaying said image on said display device includes displaying said image on a computer monitor.

33. A method according to claim 30, wherein the step of interactively selecting at least one sampling region includes selecting at least two sampling regions.

34. A method according to claim 30, wherein the step of interactively selecting at least one sampling region is performed using a pointing device.

35. A method according to claim 34, wherein said pointing device is a mouse.

36. A method according to claim 30, wherein the step of interactively selecting at least one sampling region includes selecting the location of said at least one sampling region.

37. A method according to claim 30, wherein the step of interactively selecting at least one sampling region includes selecting the size of said at least one sampling region.

38. A method according to claim 30, wherein the step of interactively selecting at least one sampling region includes selecting the shape of said at least one sampling region.

39. A method of utilizing data captured from a testing system and displayed as at least one curve, an analysis being performed on the at least one curve for identifying at least one characteristic of the at least one curve, the results of the analysis being graphically displayed to a user, the method comprising the steps of: determining if the analysis has properly identified the at least one characteristic; and interactively changing the results of the analysis.

40. A method according to claim 39, wherein the step of determining if the analysis has properly identified the at least one characteristic includes visually determining if at least one visual indicator is located properly with respect to the at least one curve.

41. A method according to claim 39, wherein the at least one characteristic is identified by a visual indicator and the step of interactively changing the results of the analysis includes moving the visual indicator.

42. A method according to claim 41, wherein the visual indicator is moved using a pointing device.

43. A method according to claim 41, wherein the visual indicator is moved by dragging and dropping the visual indicator.

44. A method according to claim 39, wherein the at least one characteristic is identified by a visual indicator and the step of interactively changing the results of the analysis includes removing the visual indicator.

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45. A method according to claim 39, wherein the step of interactively changing the results of the analysis includes adding the visual indicator.

46. A method of determining the movement of fringes and nodes of an interference pattern through at least one sampling region, comprising the steps of:
    displaying at least one curve representing the movement of fringes and nodes of the interference pattern through the at least one sampling region;
    analyzing the at least one characteristic of said curve;
    displaying to a user a result of said analysis; and
    allowing a user to interactively change said result.

47. A method according to claim 46, wherein the step of analyzing the at least one characteristic of said curve includes determining the locations of maxima and minima.

48. A method according to claim 47, wherein the step of displaying to a user said result of said analysis include displaying in conjunction with said curve a visual indicator corresponding to each location of said maxima and minima.

49. A method according to claim 46, wherein the step of displaying to a user said result of said analysis includes displaying in conjunction with said curve a plurality of visual indicators.

50. A method according to claim 46, wherein the step of allowing a user to interactively change said result includes allowing a user to move at least one visual indicator.

51. A method according to claim 46, wherein the step of allowing a user to interactively change said result includes allowing a user to add at least one visual indicator.

52. A method according to claim 46, wherein the step of allowing a user to interactively change said result includes allowing a user to delete at least one visual indicator.

53. A bulge testing system for testing a thin film window, comprising:
    an interferometer for providing an interference pattern;

an image detector for detecting an image of said interference pattern;

a display device in communication with said image detector for displaying said image of the interference pattern; and

a user interface for allowing a user to interactively select at least one sampling region from said image displayed on said display device.

54. A bulge testing system according to claim 53, wherein said image displayed on said display device includes the entire thin film window.

55. A bulge testing system according to claim 53, wherein said user interface allows a user to select the shape of said at least one sampling region.

56. A bulge testing system according to claim 53, wherein said user interface allows a user to selected the size of said at least one sampling region.

57. A bulge testing system according to claim 53, wherein said user interface allows a user to select at least two sampling regions.

58. A bulge testing system according to claim 57, wherein said user interface allows a user to select the shapes of each of said at least two sampling regions.

59. A bulge testing system according to claim 57, wherein said user interface allows a user to selected the size of each of said at least two sampling regions.

60. A bulge testing system for testing a thin film window, comprising:

an interferometer for providing an interference pattern having fringes and nodes;

a detector for detecting the movement of said fringes and said nodes at a sampling region;

a display device in communication with said detector for displaying a curve representing the passage of said fringes and said nodes through said sampling region; and

a user interface for analyzing at least one characteristic of said curve and displaying a result of said analysis on said display device; and

a module for allowing a user to interactively change said result.

61. A bulge testing system according to claim 60, wherein said detector is an image detector.

62. A bulge testing system according to claim 61, wherein said image detector is a digital camera.

63. A bulge testing system according to claim 60, wherein said user interface determines a location on said curve of at least one maximum or minimum and displays to a user said location.

64. A bulge testing system according to claim 63, wherein said user interface displays a first visual indicator at said location.

65. A bulge testing system according to claim 64, wherein said module allows a user to move said first visual indicator.

66. A bulge testing system according to claim 64, wherein said module allows a user to add a second visual indicator.

67. A bulge testing system according to claim 64, wherein said module allows a user to remove said first visual indicator.

68. A bulge testing system according to claim 60, further comprising a second module for using said result as modified by a user.

69. A system of determining the movement of fringes and/or nodes of an interference pattern displayed on a display device, comprising:
    a first means for capturing an image of the interference pattern;
    a second means for displaying said image on the display device; and
    a third means for interactively selecting at least one sampling region from said image displayed on the display device.

70. A computer readable medium containing a method executed on a computer for determining the movement of fringes and/or nodes of an interference pattern displayed on a display device, the method comprising the steps of:

capturing an image of the interference pattern;

displaying said image on the display device; and

allowing a user to interactively select at least one sampling region from said image displayed on the display device.